A Recently Discovered Race of the Cape Lycaenid *Phasis thero* (L.)*

By C. G. C. Dickson and C. W. Wykeham

No. 31

This new member of the *Phasis thero* (L.) group, while certainly resembling basically nominate *thero,* can be distinguished immediately from the nominate race or any of the other described members of the group by means of several distinctive features which are readily apparent.

Phasis thero **cedarbergae** subsp. nov.

Both sexes differ from nominate *Ph. thero* in the relatively shorter and deeper forewings, the more darkly marked underside (at least that of the forewing) and in certain features which are noticeable in the silvery-white markings of the hindwing underside, the series which occurs discally forming a particularly sharply and neatly defined broken chain of thin lunular markings.

Male. Upperside.

Forewing. Orange-red marking much as in nominate race (in the holotype, normally developed); if noticeably reduced, there is a fairly proportionate reduction in the size of the markings—not, generally, a complete disappearance of some, with others remaining prominent.

Hindwing. Much the same as that of nominate race, in examples with the marking largely absent: no male specimens of *cedarbergae* which have been seen as yet have had any very prominant development of the orange-red marking submarginally, and the majority have only had a trace of it towards the anal-angle—in some barely apparent.

Underside.

Forewing. The dark marking, including that which occurs postdiscally and above innermargin, broader in general and more conspicuous than in nominate *thero;* the lighter portion of the wing immediately adjoining innermargin tending to be of a more whitish-grey tone.

Hindwing. Dark zones inclined to be more pronounced than in nominate *thero,* though not invariably so. Light discal series as described initially.

Length of forewing: 18·5-21·5 mm. (19·5 mm., in holotype).

Female. Upperside.

Forewing. Marking, in most specimens, of a more orange tone than in male, as is not infrequently the case in nominate race also.

Papilio thero Linnaeus, 1764. *Mus. Lud. Ulr. Reg.,* p. 328, n. 146.

Hindwing. In general, as in nominate race, with the development or otherwise of the submarginal series of orange-red markings varying in individual specimens (in one paratype absent altogether and in two others only very fragmentary and dull, and not apparent in the upper part of its length). With one exception, this has not, in any of the specimens under examination, reached anything like the maximum development which may be attained in some females of nominate *thero.*

Underside.

Forewing. Features very largely as given for male.

Hindwing. As a whole, like that of male. The components of the discal series of silvery-white markings are in the female also, sharply and neatly defined in the lower half of the series, below the main "key" marking. (In one paratype the latter is extremely narrow and practically linear for the greater part of its length.)

Length of forewing: 21·25-25·0 mm. (23·5 mm., in allotype).

Body and ancillary parts, in both sexes, very much as in nominate race; end of antennal club usually less noticeably tipped with orange in *cedarbergae.*

♂ Holotype, WESTERN CAPE PROVINCE: Cedarberg, 18.xi.1972 (C. W. Wyekham); in Coll. C.W.W.

♀ Allotype, W. CAPE PROVINCE: data as holotype; also allocation of specimen.

Paratypes presented to British Museum (N.H.): data as holotype, 1 ♂, 1 ♀ (C.W.W.); British Museum Reg. Nos. Rh. 17320 and Rh. 17321.

Paratypes in Coll. C. W. Wykeham: as holotype, 18.xi.1972, 2 ♂♂, 3 ♀♀; 2.xii.1972, 1 ♂, 1♀; 11.xi.1973, 9 ♂♂, 2 ♀♀ (C.W.W.).

Paratypes in Coll. Dr Jeffrey Kaplan: as holotype, 25.xi. 1972, 1 ♂, 3 ♀♀ (J.K.).

Paratypes in Coll. K. M. Pennington: as holotype, 11.xi. 1973, 1 ♂, 1 ♀ (C.W.W.).

Paratypes in Coll. Transvaal Museum: as holotype, 18.xi. 1972, 1 ♂, 2.xii.1972, 1 ♀, 11.xi.1973, 1 ♂, 1 ♀ (C.W.W.).

Paratypes in Coll. National Museum, Bulawayo, Rhodesia: as holotype, 18.xi.1972, 1 ♂, 1♀ (C.W.W.).

In one of the male paratypes the postmedian chain of silvery white markings of the hindwing underside is incompletely developed below the large central marking distad of the cell. While there is some variation in the degree of development of the dark marking of the underside, its greater development, in the forewing anyway, is in general, certainly characteristic of this race. The different proportions of the forewing, combined with the other characters, raises the possibility of another species being involved; but, as the present insect and the nominate one are not, as far is known, other than allopatric, these differences do not in themselves give any proof of a specific difference.

The male genitalia of *Ph. thero thero* have been described and figured by Murray in *Ann. S. Afr. Mus.*, **44** (6) (1956) and by Stempffer in *Bull. Br. Mus. nat. Hist.* (Ent.) Suppl. **10** (1967). The figures in the present paper give views of the dissected parts of the genitalia of *Ph. thero cedarbergae* and, for comparison, of *Ph. clavum* Murray; also the armatures of nominate *thero* and *cedarbergae*. Reference to the parts and any necessary explanation as to the form of mounting, etc., is given in the legend to the plate. It has not been possible, up to the present, to detect any constant differences of significance between the genitalia of *thero thero* and *thero cedarbergae;* some which at first appeared to exist seem to have been due only to normal individual variation in specimens and/or to small discrepancies in mounting, including the degree of compression of the valves. In the case of *Ph. clavum,* valves of this insect which have been examined have had the small sharp bulge below the main distal projection produced into a definite projection (as in the figure) and the tegumen and uncus combined have been larger in proportion to the rest of the armature than in the other taxa.

Another, unusually large, localised race of *Ph. thero* from Du Toit's Kloof, C.P. (alluded to by Clark and Dickson in *Life Histories of the South African Lycaenid Butterflies,* p. 197 (1971) has, judging by a single preparation, valves with a more definite, smaller projection, rather approaching that of *clavum;* and this insect will receive further investigation.

With regard to the habitat and habits of *Ph. thero cedarbergae,* C.C.W. notes: "This race of *Phasis thero* was found in November, 1972, in the Cedarberg Mountains not far from Cedarberg Post Office in low-lying scrub growing along the side of the Matjes River. The butterfly does not seem to wander far from its food-plant and it feeds mainly at Bramble flowers which grow amongst the shrub which appears to be the larval food-plant. The fight is very irregular and fairly fast. When approached the insect usually takes cover in the thick scrub and is therefore difficult to net. The best time for specimens seems to be early morning or late afternoon, when they are less active than at other times." A fresh female specimen of *Ph. clavum* was taken by Dr Jeffrey Kaplan in the same spot on 25th November 1972.

One additional taxon, *Phasis braueri* (described by the senior author in *Entomologist's Rec. J. Var.,* **80** (11) (1968)), completes the recognised members of this group.

The early stages of *Ph. thero thero* have been described and figured by Murray in *J. ent. Soc. sthn Afr.,* **2** (1939) and those of this species, *Ph. clavum* and *Ph. braueri* by Clark and Dickson (1971) (*op. cit.*).

"Blencathra", Cambridge Avenue,
St Michael's Estate, Cape Town.

Genitalia of *Phasis*.

Fig. 1. ♂ Genitalia of *Phasis thero thero* (L.) (left valve removed). (Melkbosch Strand, C.P.).

Fig. 2. Left valve of above preparation.

Fig. 3. ♂ Genitalia of *Ph. thero cedarbergae* subsp. nov. (left valve removed). (From type-locality).

Fig. 4. Left valve of above preparation.

Fig. 5. Valves. juxta and aedeagus of *Ph. thero thero* (L.) (2nd specimen). (Melkbosch Strand, C.P.).

Fig. 6. Valve of *Ph. thero thero* (L.) (3rd specimen). (Klip Berg, nr. Darling, C.P.).

Fig. 7. ♂ Genitalia of *Ph. clavum* Murray: basic portion of armature. (Piquetberg Mtn., C.P.).

Fig. 8. Valves, juxta and aedeagus of above specimen of *Ph. clavum* Murray.

Figures 16 times natural size.

Note: Valves represented by Figs. 2 and 4 mounted under slight pressure, that by Fig. 6, under greater pressure.

The Early Stages of *Lampronia praelatella* (Denis & Schiffermuller, 1775) (Lepidoptera: Incurvariidae)

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Stainton (1859: 296) states that the larva of *praelatella* feeds "in a flat case on the underside of wild strawberry leaves. ix-v". Meyrick (1928: 840) repeats this information, adding that the case is made of leaf fragments. Ford 1949: 188) likewise repeats what his predecessors had written, but states further that "the larva drops off the leaves at the slightest disturbance." Here Ford must have been quoting from another authority, since we know from his collection, which is now housed in the British Museum (Natural History) that he never himself bred *praelatella*. Jacobs (1949: 212) writes "the larva . . . feeds in a flat case on the underside of *Fragaria* leaves, often two or three to a leaf. The case is shaped like a figure 8. The larva is known in the case stage from August to May, and the adult moth appears in June; probably before entering the case stage the larva will be found to feed in the fruits or mine the leaves of the foodplant."

These statements give an incomplete and, in certain respects, an inaccurate account of the life history. The female has a chitinous ovipositor and, like many other members of the Incurvariidae, it pierces the leaf of the foodplant and oviposits beneath the cuticle. The egg is usually laid near the margin of a strawberry leaf, in many instances, near the apex. The larva in its first instar is a leaf-miner, consuming all the parenchyma between the upper and lower epidermis.